

What is claimed is:

1. A method for producing a granite-like appearance or other visual or textural effect on a sheet-like molded thermoplastic product, comprising the steps of:
  - extruding at least one thermoplastic in sheet form, said extruded thermoplastic having at least one visible surface;
  - providing a color-containing thermoplastic resin system comprising at least one thermoplastic resin that is compatible with said extruded thermoplastic;
  - applying said color-containing system to said visible surface of said extruded thermoplastic to produce a treated visible surface; and
  - applying a compressive force to said treated visible surface of said extruded thermoplastic.
2. A method in accordance with claim 1, wherein said surface of said extruded thermoplastic is maintained at a temperature sufficient to allow said color-containing system to adhere or bond to said surface of said thermoplastic during said method.
3. A method in accordance with claim 1, wherein said compressive force is sufficient to promote adherence of said color-containing system to said surface of said extruded thermoplastic.

4. A method in accordance with claim 1, wherein said extruded thermoplastic is selected from the group consisting of polyacetals, acrylonitrile-styrene-acrylates, acrylonitrile-butadiene-styrenes, acrylonitrile-ethylene-styrenes, styrene-acrylonitriles, styrene-maleic anhydrides, nylons, polycarbonates, polybutylene terephthalates, polyethylenes, polypropylenes, polystyrenes, polyurethanes, polyvinyl chlorides, acrylics, and mixtures thereof.

5. A method in accordance with claim 1, wherein said extruded thermoplastic is selected from the group consisting of: acrylonitrile-styrene-acrylate copolymers; acrylonitrile-butadiene-styrene copolymers; acrylonitrile-ethylene-styrene copolymers; polyvinyl chloride; blends of polycarbonate and acrylonitrile-butadiene-styrene copolymers in the ratio of about 5:95 to about 95:5 weight percent; blends of acrylonitrile-butadiene-styrene copolymers and nylon in the ratio of about 5:95 to about 95:5 weight percent; blends of polycarbonate and acrylonitrile-styrene-acrylate copolymers in the ratio of about 5:95 to about 95:5 weight percent; blends of polyvinyl chloride and acrylonitrile-styrene-acrylate copolymers in the ratio of about 20:80 to about 80:20 weight percent; and blends of acrylonitrile-styrene-acrylate copolymers and acrylonitrile-ethylene-styrene copolymers in the ratio of about 20:80 to about 80:20 weight percent.

6. A method in accordance with claim 1, wherein said color-containing system is comprised of at least one pigment and at least one thermoplastic binder or carrier.

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7. A method in accordance with claim 1, wherein said color-containing system is comprised of at least one dye and at least one thermoplastic binder or carrier.
8. A method in accordance with claim 1, wherein said compressive force is supplied by processing said extruded thermoplastic through at least one set of rolls.
9. A method in accordance with claim 1, wherein said extruded thermoplastic is maintained at a temperature in the range of about 440°F to about 480°F prior to the application of said color-containing system.
10. A method in accordance with claim 1, wherein said color-containing system is maintained at a temperature in the range of about ambient temperature to about 280°F prior to application onto the surface of said extruded thermoplastic.
11. A method in accordance with claim 1, wherein said color-containing system comprises a plurality of particles.
12. A product prepared in accordance with the method of claim 1.
13. A method in accordance with claim 6, wherein said binder is a thermoplastic selected from the group consisting of polyacetals, acrylonitrile-styrene-acrylates, acrylonitrile-butadiene-styrenes, acrylonitrile-ethylene-styrenes, styrene-acrylonitriles,

styrene-maleic anhydrides, nylons, polycarbonates, polybutylene terephthalates, polyethylenes, polypropylenes, polystyrenes, polyurethanes, polyvinyl chlorides, acrylics, and mixtures thereof.

14. A method in accordance with claim 6, wherein said binder is a thermoplastic selected from the group consisting of: acrylonitrile-styrene-acrylate copolymers; acrylonitrile-butadiene-styrene copolymers; acrylonitrile-ethylene-styrene copolymers; polyvinyl chloride; blends of polycarbonate and acrylonitrile-butadiene-styrene copolymers in the ratio of about 5:95 to about 95:5 weight percent; blends of acrylonitrile-butadiene-styrene copolymers and nylon in the ratio of about 5:95 to about 95:5 weight percent; blends of polycarbonate and acrylonitrile-styrene-acrylate copolymers in the ratio of about 5:95 to about 95:5 weight percent; blends of polyvinyl chloride and acrylonitrile-styrene-acrylate copolymers in the ratio of about 20:80 to about 80:20 weight percent; and blends of acrylonitrile-styrene-acrylate copolymers and acrylonitrile-ethylene-styrene copolymers in the ratio of about 20:80 to about 80:20 weight percent.

15. A method in accordance with claim 11, wherein said particles of said color-containing system are of from about -10 to about +5000 U.S. Standard mesh size.

16. An apparatus for producing a granite-like appearance or other visual or textural affect on a sheet-like molded thermoplastic product, comprising:

means for extruding a sheet of thermoplastic, said sheet of extruded thermoplastic having at least one visible surface;

means for applying at least one color-containing thermoplastic resin system to said visible surface of said sheet of extruded thermoplastic; and

means for applying a compressive force to said sheet of extruded thermoplastic.

17. An apparatus in accordance with claim 16, further comprising:

means for vibrating said color-containing system application means;

means for metering or otherwise controlling the application of said color-containing system; and

means for recycling substantially all of any unapplied color-containing system.

18. An apparatus in accordance with claim 16, wherein said color-containing system comprises a plurality of particles.

19. An apparatus in accordance with claim 18, wherein said particles of said color-containing system are of from about -10 to about +5000 U.S. Standard mesh size.

20. A sheet-like molded thermoplastic product wherein: said thermoplastic is first extruded into a sheet having at least one visible surface; said surface having been treated with a sufficient amount of at least one color-containing thermoplastic resin system to impart a granite-like appearance or other visual or textural affect on said surface of said

sheet of extruded thermoplastic, said treated surface also having been exposed to a compressive force sufficient to promote adherence of said color-containing resin system to said surface.

21. A thermoplastic product in accordance with claim 20, wherein said extruded thermoplastic is selected from the group consisting of polyacetals, acrylonitrile-styrene-acrylates, acrylonitrile-butadiene-styrenes, acrylonitrile-ethylene-styrenes, styrene-acrylonitriles, styrene-maleic anhydrides, nylons, polycarbonates, polybutylene terephthalates, polyethylenes, polypropylenes, polystyrenes, polyurethanes, polyvinyl chlorides, acrylics, and mixtures thereof.

22. A thermoplastic product in accordance with claim 20, wherein said extruded thermoplastic is selected from the group consisting of: acrylonitrile-styrene-acrylate copolymers; acrylonitrile-butadiene-styrene copolymers; acrylonitrile-ethylene-styrene copolymers; polyvinyl chloride; blends of polycarbonate and acrylonitrile-butadiene-styrene copolymers in the ratio of about 5:95 to about 95:5 weight percent; blends of acrylonitrile-butadiene-styrene copolymers and nylon in the ratio of about 5:95 to about 95:5 weight percent; blends of polycarbonate and acrylonitrile-styrene-acrylate copolymers in the ratio of about 5:95 to about 95:5 weight percent; blends of polyvinyl chloride and acrylonitrile-styrene-acrylate copolymers in the ratio of about 20:80 to about 80:20 weight percent; and blends of acrylonitrile-styrene-acrylate copolymers and acrylonitrile-ethylene-styrene copolymers in the ratio of about 20:80 to about 80:20 weight percent.

23. A thermoplastic product in accordance with claim 20, wherein the thermoplastic material for said color-containing system comprises a thermoplastic binder or carrier material selected from the group consisting of polyacetals, acrylonitrile-styrene-acrylates, acrylonitrile-butadiene-styrenes, acrylonitrile-ethylene-styrene, styrene-acrylonitriles, styrene-maleic anhydrides, nylons, polycarbonates, polybutylene terephthalates, polypropylenes, polystyrenes, polyurethanes, polyvinyl chlorides, acrylics, and mixtures thereof.

24. A thermoplastic product in accordance with claim 20, wherein said binder or carrier is selected from the group consisting of: acrylonitrile-styrene-acrylate copolymers; acrylonitrile-butadiene-styrene copolymers; acrylonitrile-ethylene-styrene copolymers; polyvinyl chloride; blends of polycarbonate and acrylonitrile-butadiene-styrene copolymers in the ratio of about 5:95 to about 95:5 weight percent; blends of acrylonitrile-butadiene-styrene copolymers and nylon in the ratio of about 5:95 to about 95:5 weight percent; blends of polycarbonate and acrylonitrile-styrene-acrylate copolymers in the ratio of about 5:95 to about 95:5 weight percent; blends of polyvinyl chloride and acrylonitrile-styrene-acrylate copolymers in the ratio of about 20:80 to about 80:20 weight percent; and blends of acrylonitrile-styrene-acrylate copolymers and acrylonitrile-ethylene-styrene copolymers in the ratio of about 20:80 to about 80:20 weight percent.

25. A thermoplastic product in accordance with claim 20, wherein said color-containing system comprises a plurality of particles.

26. A thermoplastic product in accordance with claim 25, wherein said particles of said color-containing system are of from about -10 to about +5000 U.S. Standard mesh size.

27. A thermoplastic product comprising a first layer or zone and a second layer or zone, said first layer or zone comprising an extruded thermoplastic sheet product formed from at least one thermoplastic, and said second layer or zone comprising a color-containing thermoplastic resin system adhering to said first layer or zone to impart a granite-like appearance or other visual or textural effect on a surface of said sheet of thermoplastic, said color-containing system of said second layer or zone comprising at least one pigment and at least one thermoplastic binder or carrier material, said first zone and said second zone having been compressed after said application.

28. A thermoplastic product in accordance with claim 27, wherein said extruded thermoplastic is selected from the group consisting of polyacetals, acrylonitrile-styrene-acrylates, acrylonitrile-butadiene-styrenes, acrylonitrile-ethylene-styrene, styrene-acrylonitriles, styrene-maleic anhydrides, nylons, polycarbonates, polybutylene terephthalates, polypropylenes, polystyrenes, polyurethanes, polyvinyl chlorides, acrylics, and mixtures thereof.

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29. A thermoplastic product in accordance with claim 27, wherein said extruded thermoplastic is selected from the group consisting of: acrylonitrile-styrene-acrylate copolymers; acrylonitrile-butadiene-styrene copolymers; acrylonitrile-ethylene-styrene copolymers; polyvinyl chloride; blends of polycarbonate and acrylonitrile-butadiene-styrene copolymers in the ratio of about 5:95 to about 95:5 weight percent; blends of acrylonitrile-butadiene-styrene copolymers and nylon in the ratio of about 5:95 to about 95:5 weight percent; blends of polycarbonate and acrylonitrile-styrene-acrylate copolymers in the ratio of about 5:95 to about 95:5 weight percent; blends of polyvinyl chloride and acrylonitrile-styrene-acrylate copolymers in the ratio of about 20:80 to about 80:20 weight percent; and blends of acrylonitrile-styrene-acrylate copolymers and acrylonitrile-ethylene-styrene copolymers in the ratio of about 20:80 to about 80:20 weight percent.

30. A thermoplastic product in accordance with claim 27, wherein said thermoplastic binder material is selected from the group consisting of polyacetals, acrylonitrile-styrene-acrylates, acrylonitrile-butadiene-styrenes, acrylonitrile-ethylene-styrene, styrene-acrylonitriles, styrene-maleic anhydrides, nylons, polycarbonates, polybutylene terephthalates, polypropylenes, polystyrenes, polyurethanes, polyvinyl chlorides, acrylics, and mixtures thereof.

31. A thermoplastic product in accordance with claim 27, wherein said thermoplastic binder or carrier material is selected from the group consisting of:

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acrylonitrile-styrene-acrylate copolymers; acrylonitrile-butadiene-styrene copolymers; acrylonitrile-ethylene-styrene copolymers; polyvinyl chloride; blends of polycarbonate and acrylonitrile-butadiene-styrene copolymers in the ratio of about 5:95 to about 95:5 weight percent; blends of acrylonitrile-butadiene-styrene copolymers and nylon in the ratio of about 5:95 to about 95:5 weight percent; blends of polycarbonate and acrylonitrile-styrene-acrylate copolymers in the ratio of about 5:95 to about 95:5 weight percent; blends of polyvinyl chloride and acrylonitrile-styrene-acrylate copolymers in the ratio of about 20:80 to about 80:20 weight percent; and blends of acrylonitrile-styrene-acrylate copolymers and acrylonitrile-ethylene-styrene copolymers in the ratio of about 20:80 to about 80:20 weight percent.

32. A thermoplastic product in accordance with claim 27, wherein said color-containing system comprises a plurality of particles.

33. A thermoplastic product in accordance with claim 32, wherein said particles of said color-containing system are of from about -10 to about +5000 U.S. Standard mesh size.